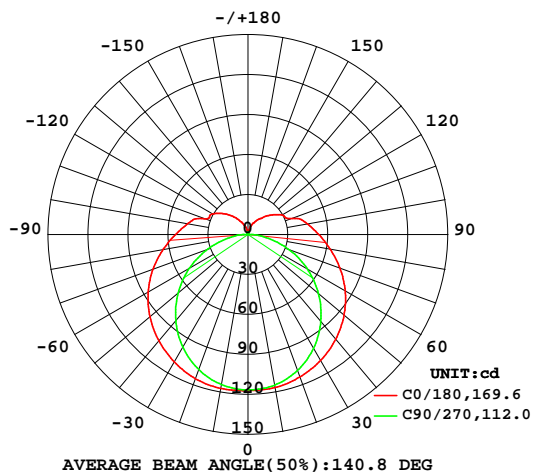


LUMINAIRE PHOTOMETRIC TEST REPORT

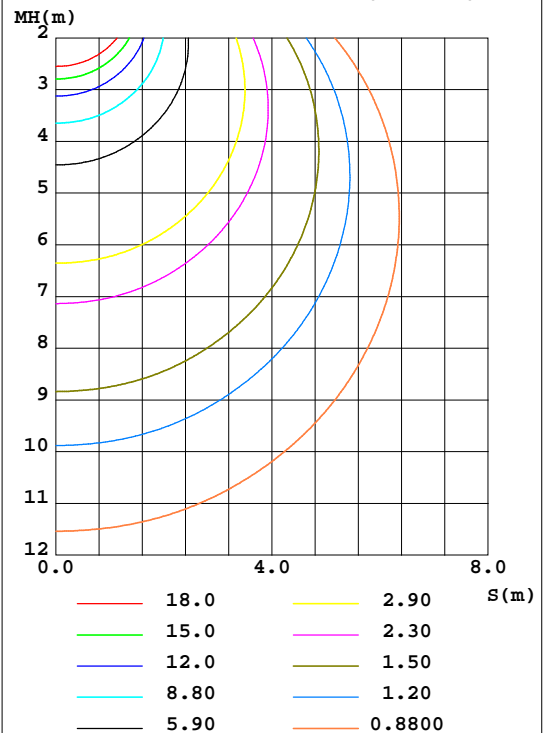
Test:U:24.00V I:0.4300A P:10.30W PF:1.000 Freq:0Hz Lamp Flux:532.102x1 lm		
NAME: NNS1224	TYPE:	WEIGHT:
SPEC.:NNS1224-8NW24CSS050CC0100	DIM.: 1000*12*24mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 51.66 lm/W			
MODEL	NNS1224	I _{max} (cd)	117.3	S/MH(C0/180)	1.41
NOMINAL POWER(W)	9.6	LOR(%)	100.0	S/MH(C90/270)	1.25
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	532.10	h UP,DN(C0-180)	8.9,40.7
NOMINAL FLUX(lm)	532.102	CIE CLASS	SEMI-D.	h UP,DN(C180-360)	9.1,41.2
LAMPS INSIDE	1	h up(%)	18.1	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	24	h down(%)	81.9	CIBSE SHR MAX	1.50

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

g Range: 0 - 180DEG
Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

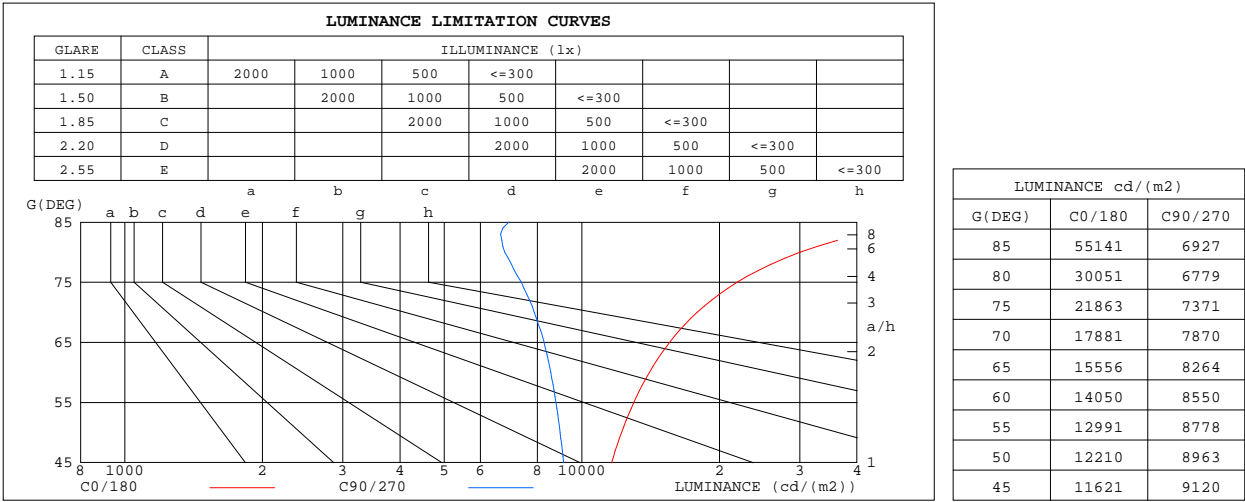
g	C0	C90	C180	C270					g	F zone	F total	%lum,lamp
10	116.6	114.8	117.3	114.4					0~ 10	11.11	11.11	2.09,2.09
20	113.8	108.6	115.2	108.0					10~ 20	32.21	43.32	8.14,8.14
30	109.2	98.56	110.5	97.77					20~ 30	49.85	93.18	17.5,17.5
40	102.6	85.12	104.1	84.37					30~ 40	62.19	155.4	29.2,29.2
50	94.18	69.14	96.10	68.47					40~ 50	68.15	223.5	42,42
60	84.30	51.30	86.50	50.81					50~ 60	67.37	290.9	54.7,54.7
70	73.39	32.30	75.77	32.08					60~ 70	60.32	351.2	66,66
80	62.62	14.13	64.58	14.22					70~ 80	48.60	399.8	75.1,75.1
90	53.19	2.830	54.47	3.388					80~ 90	36.16	436.0	81.9,81.9
100	45.59	0.4317	46.22	0.3987					90~100	27.88	463.8	87.2,87.2
110	35.55	0.6703	35.01	0.6045					100~110	22.44	486.3	91.4,91.4
120	29.63	0.9275	30.94	0.8175					110~120	16.20	502.5	94.4,94.4
130	22.87	1.127	24.62	1.023					120~130	12.60	515.1	96.8,96.8
140	16.15	1.307	17.87	1.223					130~140	8.401	523.5	98.4,98.4
150	11.47	1.488	11.64	1.410					140~150	4.991	528.5	99.3,99.3
160	6.868	1.790	6.887	1.705					150~160	2.549	531.0	99.8,99.8
170	1.931	2.080	1.711	2.021					160~170	0.8917	531.9	100,100
180	1.815	2.253	1.835	2.253					170~180	0.1862	532.1	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:24.00V I:0.4300A P:10.30W PF:1.000 Freq:0Hz Lamp Flux:532.102x1 lm		
NAME: NNS1224	TYPE:	WEIGHT:
SPEC.:NNS1224-8NW24CSS050CC0100	DIM.: 1000*12*24mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:



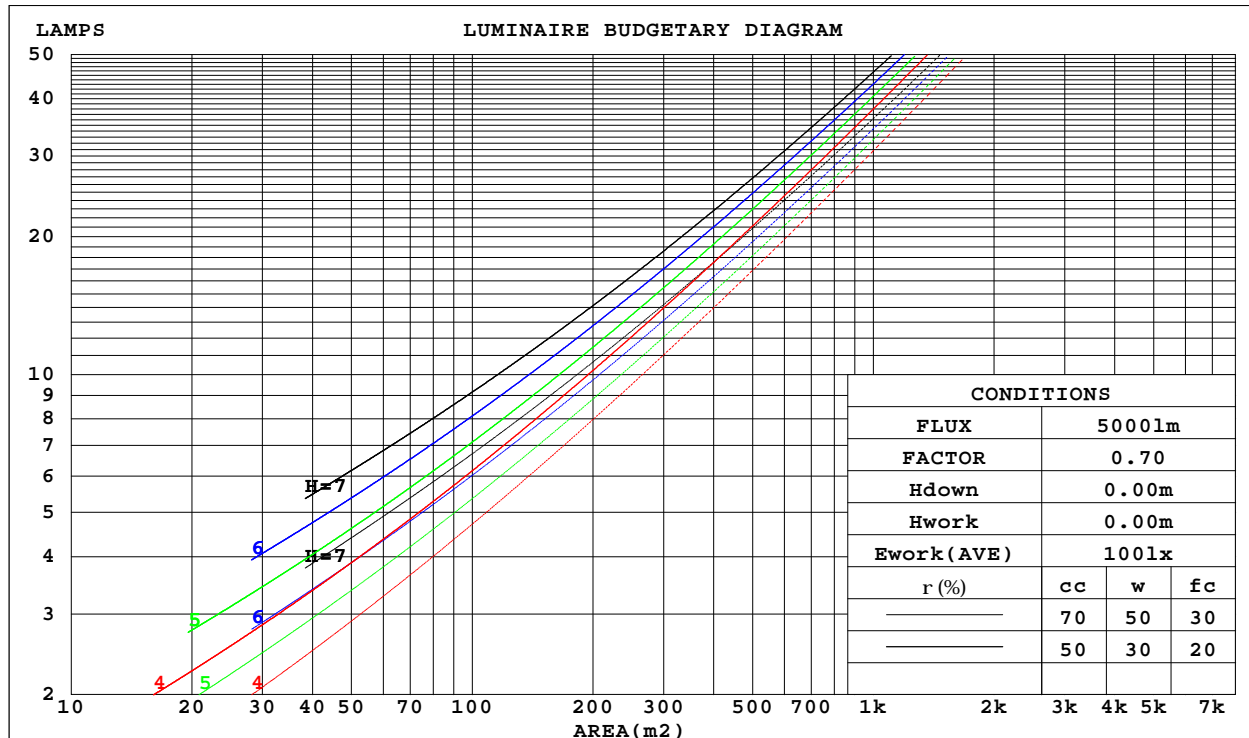
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:24.00V I:0.4300A P:10.30W PF:1.000 Freq:0Hz Lamp Flux:532.102x1 lm		
NAME: NNS1224	TYPE:	WEIGHT:
SPEC.:NNS1224-8NW24CSS050CC0100	DIM.: 1000*12*24mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

r _{cc}	80%			70%			50%			30%			10%			0
r _w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
r _{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio Coefficients of Utilization(CU)															
0.0	1.15	1.15	1.15	1.10	1.10	1.10	1.01	1.01	1.01	.93	.93	.93	.85	.85	.85	.82
1.0	.96	.91	.86	.92	.87	.83	.84	.81	.77	.77	.74	.71	.71	.68	.66	.63
2.0	.82	.75	.68	.79	.72	.66	.72	.66	.62	.66	.62	.57	.61	.57	.53	.50
3.0	.71	.62	.55	.68	.60	.54	.63	.56	.50	.58	.52	.47	.53	.48	.44	.41
4.0	.63	.53	.46	.60	.52	.45	.55	.48	.42	.51	.45	.40	.47	.42	.37	.34
5.0	.56	.46	.39	.53	.45	.38	.49	.42	.36	.45	.39	.34	.42	.36	.32	.29
6.0	.50	.41	.34	.48	.39	.33	.44	.37	.31	.41	.34	.30	.38	.32	.28	.25
7.0	.45	.36	.30	.43	.35	.29	.40	.33	.27	.37	.31	.26	.34	.29	.25	.22
8.0	.41	.32	.26	.39	.31	.26	.37	.29	.24	.34	.28	.23	.31	.26	.22	.20
9.0	.37	.29	.23	.36	.28	.23	.34	.27	.22	.31	.25	.21	.29	.24	.20	.18
10.0	.34	.26	.21	.33	.26	.20	.31	.24	.20	.29	.23	.19	.27	.22	.18	.16



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:COLORS
 Test Date:2019-07-01

g Range: 0 - 180DEG
 g Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:10.750m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:24.00V I:0.4300A P:10.30W PF:1.000 Freq:0Hz Lamp Flux:532.102x1 lm		
NAME: NNS1224	TYPE:	WEIGHT:
SPEC.:NNS1224-8NW24CSS050CC0100	DIM.: 1000*12*24mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

rcc	80%			70%			50%			30%			10%			0
rw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
rfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio Wall Exitance Coefficients(WEC)															
0.0																
1.0	.376	.214	.068	.364	.207	.066	.340	.195	.062	.318	.183	.059	.298	.173	.056	
2.0	.328	.180	.055	.317	.175	.054	.295	.164	.051	.276	.155	.048	.257	.145	.046	
3.0	.293	.156	.047	.283	.151	.046	.263	.143	.043	.245	.134	.041	.228	.126	.039	
4.0	.264	.137	.040	.255	.133	.039	.237	.126	.038	.221	.119	.036	.206	.112	.034	
5.0	.241	.123	.036	.232	.119	.035	.216	.113	.033	.201	.106	.032	.187	.100	.030	
6.0	.221	.111	.032	.213	.108	.031	.198	.102	.030	.185	.096	.028	.172	.091	.027	
7.0	.204	.101	.029	.197	.098	.028	.183	.093	.027	.171	.088	.025	.159	.083	.024	
8.0	.189	.092	.026	.183	.090	.025	.170	.085	.024	.159	.080	.023	.148	.076	.022	
9.0	.176	.085	.024	.170	.083	.023	.159	.079	.022	.148	.074	.021	.138	.070	.020	
10.0	.165	.079	.022	.160	.077	.022	.149	.073	.021	.139	.069	.020	.130	.065	.019	

rcc	80%			70%			50%			30%			10%			0
rw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
rfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio Ceiling Cavity Exitance Coefficients(CCEC)															
0.0	.328	.328	.328	.280	.280	.280	.191	.191	.191	.110	.110	.110	.035	.035	.035	
1.0	.324	.294	.268	.277	.253	.231	.189	.174	.159	.109	.101	.093	.035	.032	.030	
2.0	.317	.271	.233	.271	.234	.202	.186	.162	.141	.107	.094	.082	.034	.030	.027	
3.0	.309	.255	.212	.265	.220	.183	.182	.153	.129	.105	.089	.076	.034	.029	.025	
4.0	.302	.242	.197	.259	.209	.171	.178	.146	.121	.103	.086	.071	.033	.028	.023	
5.0	.294	.233	.187	.253	.201	.163	.174	.141	.115	.101	.083	.068	.032	.027	.022	
6.0	.287	.225	.180	.246	.195	.157	.170	.136	.111	.099	.080	.066	.032	.026	.022	
7.0	.280	.218	.175	.241	.189	.152	.166	.133	.108	.097	.078	.064	.031	.026	.021	
8.0	.273	.212	.171	.235	.184	.149	.163	.129	.106	.095	.076	.063	.031	.025	.021	
9.0	.267	.208	.168	.230	.180	.146	.159	.127	.104	.093	.075	.062	.030	.025	.021	
10.0	.261	.204	.165	.225	.177	.144	.156	.124	.103	.091	.074	.061	.030	.024	.020	

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:24.00V I:0.4300A P:10.30W PF:1.000 Freq:0Hz Lamp Flux:532.102x1 lm											
NAME: NNS1224					TYPE:			WEIGHT:			
SPEC.:NNS1224-8NW24CSS050CC0100					DIM.: 1000*12*24mm			SERIAL No.:			
MFR.: Colors					SUR.:1000*12			Shielding Angle:			
ceiling/cavity	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3	
walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3	
working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
Room dimensions	Viewed crosswise					Viewed endwise					
x = 2H y = 2H	23.1	24.5	23.6	25.0	25.5	21.4	22.7	21.9	23.2	23.8	
	25.7	27.0	26.3	27.5	28.1	22.9	24.2	23.5	24.7	25.3	
	27.2	28.4	27.7	28.9	29.6	23.6	24.8	24.1	25.3	26.0	
	28.8	29.9	29.4	30.5	31.2	24.1	25.2	24.6	25.8	26.4	
	29.7	30.8	30.3	31.4	32.1	24.2	25.3	24.8	25.9	26.6	
	30.8	31.9	31.4	32.4	33.1	24.3	25.4	24.9	26.0	26.7	
4H	2H	23.6	24.8	24.2	25.4	26.0	22.4	23.6	22.9	24.1	24.7
	3H	26.4	27.5	27.0	28.1	28.8	24.2	25.2	24.8	25.8	26.5
	4H	28.1	29.0	28.7	29.6	30.4	25.0	26.0	25.6	26.6	27.3
	6H	29.9	30.8	30.5	31.4	32.1	25.7	26.5	26.3	27.2	27.9
	8H	30.9	31.7	31.6	32.4	33.2	26.0	26.8	26.6	27.4	28.2
	12H	32.2	32.9	32.8	33.6	34.4	26.2	26.9	26.8	27.6	28.4
8H	4H	28.4	29.2	29.0	29.8	30.6	25.9	26.7	26.5	27.3	28.1
	6H	30.4	31.1	31.1	31.8	32.6	26.9	27.5	27.6	28.2	29.0
	8H	31.7	32.3	32.4	33.0	33.8	27.3	27.9	28.0	28.6	29.5
	12H	33.1	33.7	33.9	34.4	35.2	27.7	28.3	28.5	29.0	29.8
12H	4H	28.4	29.1	29.0	29.8	30.6	26.1	26.9	26.8	27.5	28.3
	6H	30.5	31.1	31.2	31.8	32.7	27.3	27.9	28.0	28.6	29.4
	8H	31.8	32.4	32.6	33.1	33.9	27.9	28.5	28.7	29.2	30.0
Variations with the observer position at spacings:											
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.2					
1.5H	+ 0.2 / - 0.2					+ 0.2 / - 0.3					
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.5					

CIE Pub.117, 532.1 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -2.2)

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:24.00V I:0.4300A P:10.30W PF:1.000 Freq:0Hz Lamp Flux:532.102x1 lm		
NAME: NNS1224	TYPE:	WEIGHT:
SPEC.:NNS1224-8NW24CSS050CC0100	DIM.: 1000*12*24mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

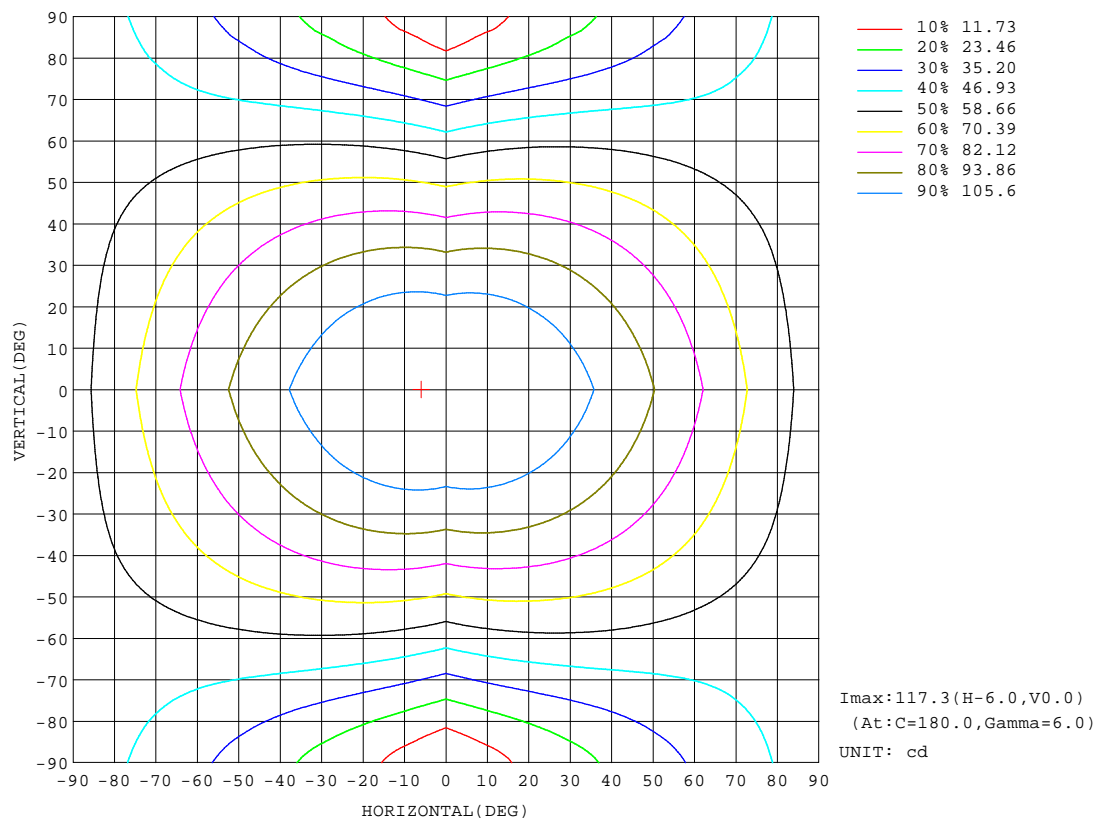
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	48	36	28	47	35	28	45	34	28	21
0.80	57	44	36	56	44	36	53	42	35	27
1.00	65	52	44	63	51	43	60	52	42	33
1.25	72	60	51	70	58	50	65	56	49	39
1.50	77	65	57	74	63	56	70	60	53	43
2.00	84	74	65	81	71	64	76	67	61	49
2.50	89	79	71	86	76	69	79	72	66	53
3.00	93	83	76	89	81	74	82	76	70	57
4.00	97	90	83	93	86	81	86	81	76	61
5.00	100	93	88	96	90	85	89	84	80	64
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:24.00V I:0.4300A P:10.30W PF:1.000 Freq:0Hz Lamp Flux:532.102x1 lm		
NAME: NNS1224	TYPE:	WEIGHT:
SPEC.:NNS1224-8NW24CSS050CC0100	DIM.: 1000*12*24mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:



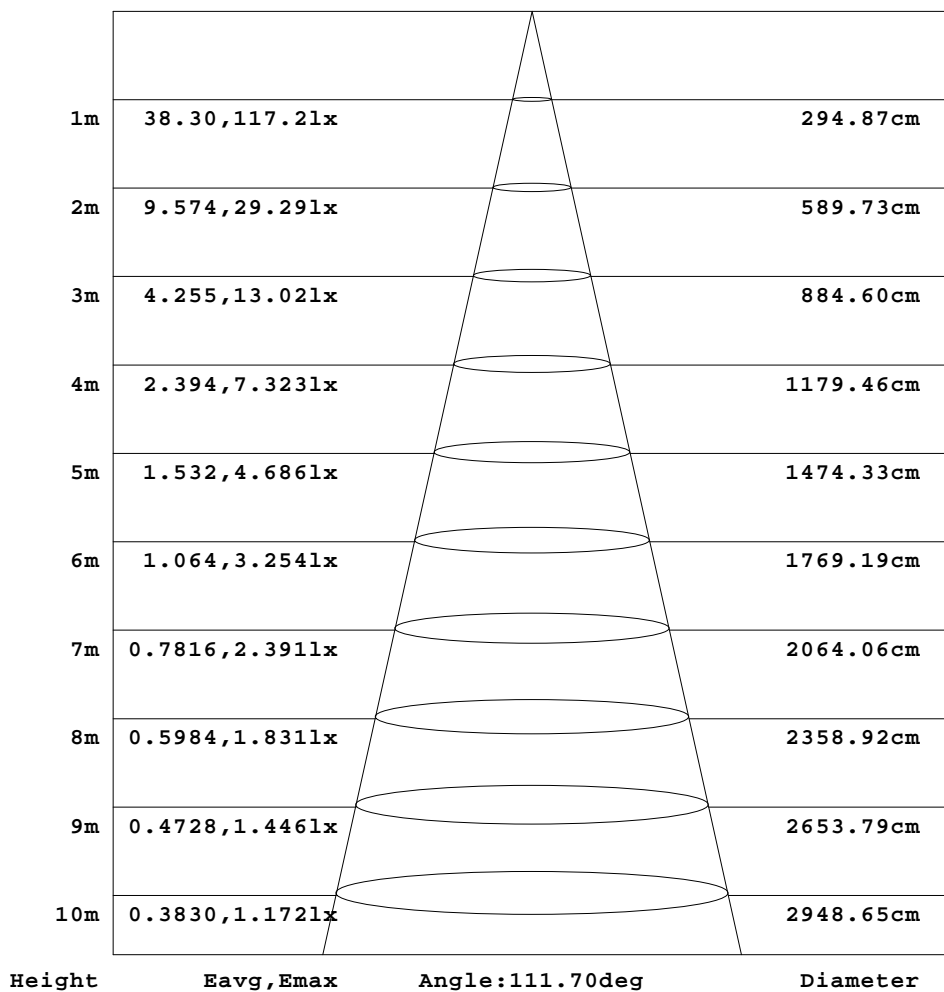
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

deg Range: 0 - 180DEG
Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

AAI Figure

Test:U:24.00V I:0.4300A P:10.30W PF:1.000 Freq:0Hz Lamp Flux:532.102x1 lm		
NAME: NNS1224	TYPE:	WEIGHT:
SPEC.:NNS1224-8NW24CSS050CC0100	DIM.: 1000*12*24mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

Flux out:264.4 lm



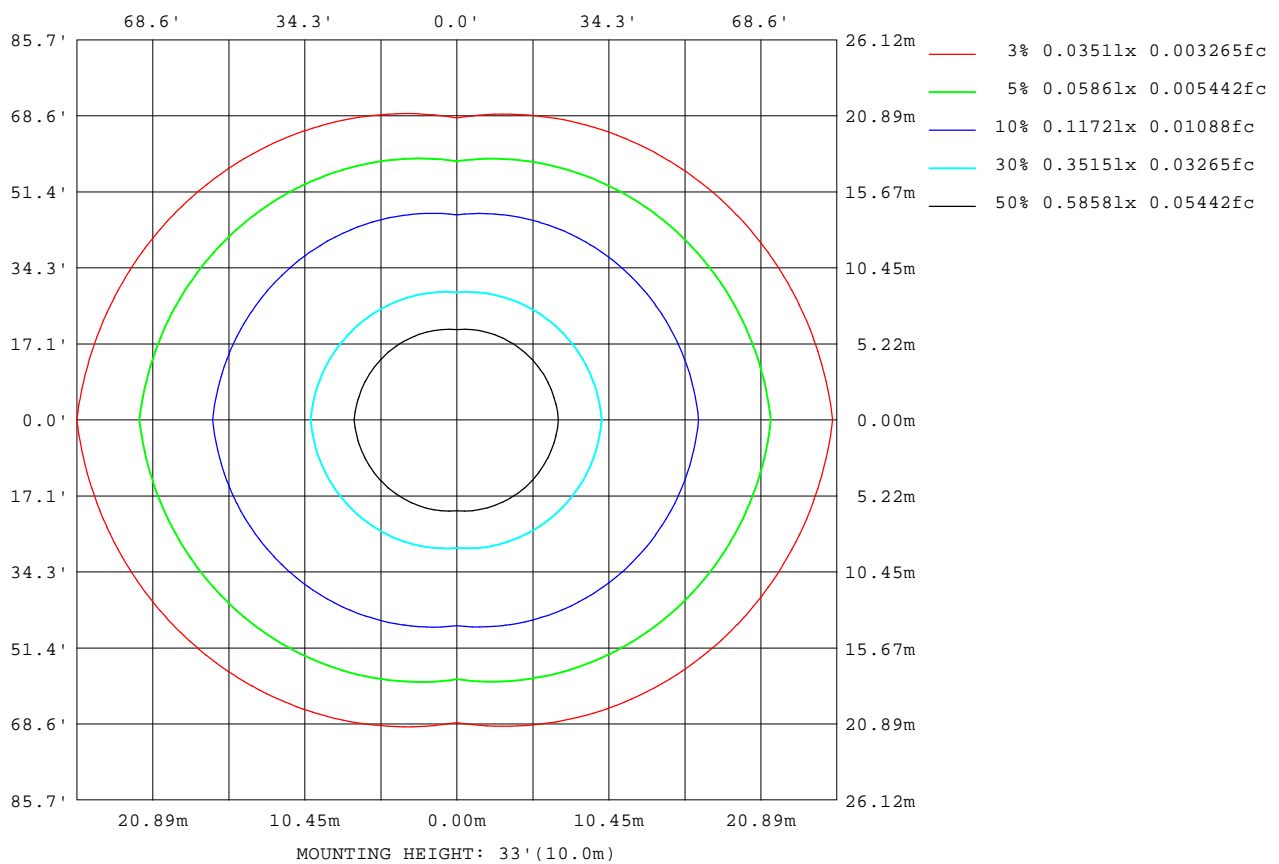
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:24.00V I:0.4300A P:10.30W PF:1.000 Freq:0Hz Lamp Flux:532.102x1 lm		
NAME: NNS1224	TYPE:	WEIGHT:
SPEC.:NNS1224-8NW24CSS050CC0100	DIM.: 1000*12*24mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:24.00V I:0.4300A P:10.30W PF:1.000 Freq:0Hz Lamp Flux:532.102x1 lm		
NAME: NNS1224	TYPE:	WEIGHT:
SPEC.:NNS1224-8NW24CSS050CC0100	DIM.: 1000*12*24mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

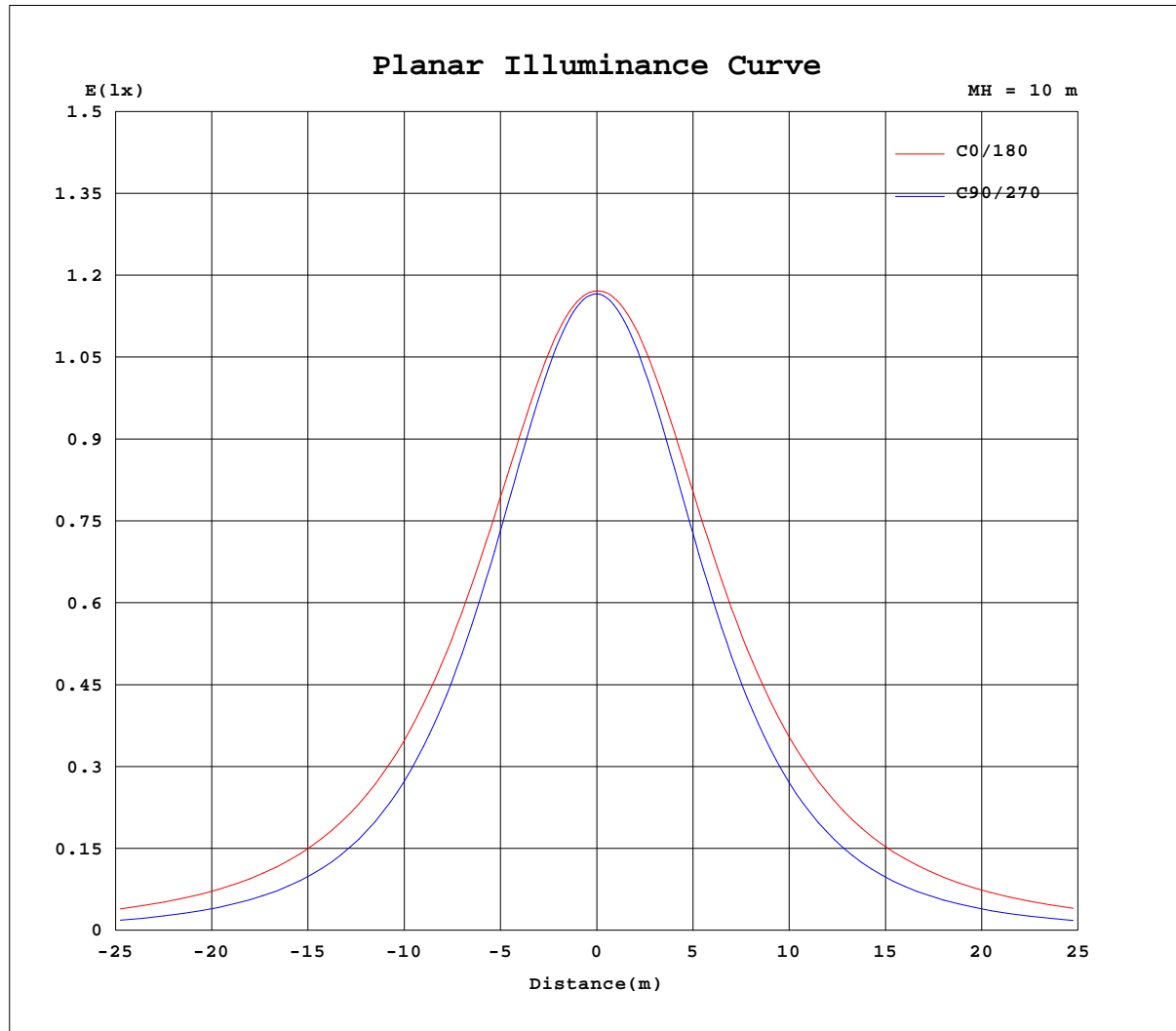
AvgL	cd/m2
L_0~180(65)av	15788
L_0~180(75)av	22223
L_0~180(85)av	55926
L_90~270(65)av	8228
L_90~270(75)av	7355
L_90~270(85)av	7191
L_45(65)av	11077
L_45(75)av	12953
L_45(85)av	25516

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:COLORS
 Test Date:2019-07-01

g Range: 0 - 180DEG
 g Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:10.750m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: COLORS
Test Date: 2019-07-01

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity: 65.0%
Test Distance: 10.750m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:24.00V I:0.4300A P:10.30W PF:1.000 Freq:0Hz Lamp Flux:532.102x1 lm		
NAME: NNS1224	TYPE:	WEIGHT:
SPEC.:NNS1224-8NW24CSS050CC0100	DIM.: 1000*12*24mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

Table--1

UNIT: cd

C(DEG) g (DEG)	0	90	180	270														
0	117	117	117	117														
5	117	116	117	116														
10	117	115	117	114														
15	116	112	117	112														
20	114	109	115	108														
25	112	104	113	103														
30	109	98.6	111	97.8														
35	106	92.2	107	91.4														
40	103	85.1	104	84.4														
45	98.6	77.4	100	76.7														
50	94.2	69.1	96.1	68.5														
55	89.4	60.4	91.5	59.8														
60	84.3	51.3	86.5	50.8														
65	78.9	41.9	81.2	41.5														
70	73.4	32.3	75.8	32.1														
75	67.9	22.9	70.1	22.8														
80	62.6	14.1	64.6	14.2														
85	57.7	7.24	59.3	7.80														
90	53.2	2.83	54.5	3.39														
95	49.2	0.66	50.1	0.39														
100	45.6	0.43	46.2	0.40														
105	42.2	0.53	42.8	0.48														
110	35.5	0.67	35.0	0.60														
115	30.9	0.80	32.0	0.71														
120	29.6	0.93	30.9	0.82														
125	26.3	1.03	27.9	0.91														
130	22.9	1.13	24.6	1.02														
135	19.9	1.22	21.1	1.11														
140	16.1	1.31	17.9	1.22														
145	14.2	1.38	14.8	1.33														
150	11.5	1.49	11.6	1.41														
155	9.55	1.62	9.44	1.55														
160	6.87	1.79	6.89	1.71														
165	3.51	1.94	3.52	1.85														
170	1.93	2.08	1.71	2.02														
175	1.80	2.19	1.71	2.14														
180	1.82	2.25	1.83	2.25														

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

g Range: 0 - 180DEG
Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks: